

## Doctorate of Nursing Practice Students' Impressions of Uses for Visual Thinking Strategies

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### Abstract

2 **Background:** Visual Thinking Strategies (VTS) is a structured art viewing technique designed to  
3 teach critical thinking and aesthetic appreciation. Literature on how VTS might be used in  
4 nursing is just emerging.

5 **Methods:** This qualitative descriptive study examined written responses to how 14 doctorate of  
6 nursing practice students felt that they might use VTS in their practice after engaging in a  
7 classroom session.

8 **Results:** Three themes emerged for how nurses might use VTS: as a teaching tool, changing  
9 thinking in practice, and facilitating communication.

10 **Conclusions:** This study contributes to the growing body of literature which suggests that art and  
11 VTS and can be used in nursing with practitioners of all levels to promote conversations that  
12 involve listening intently and considering others possibilities.

13 **Keywords:** *Aesthetics, Nursing education, Doctorate of nursing practice education, Teaching*  
14 *strategies, Visual Thinking Strategies,*

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18           The fundamental philosophy that nursing is as an art and a science has led some  
19 educators to look for ways to use art to help learners develop professional skills and attitudes  
20 (Moorman & Hensel, 2016). Grounded in social learning theory, Visual Thinking Strategies  
21 (VTS) is a structured art viewing technique of interest that can facilitate the development of  
22 aesthetic understanding and critical thinking skills (Housen, 2001& 2002). Much as nurses are  
23 thought to develop skills sequentially from novice to expert (Benner, 1982), Housen (2001)  
24 theorized that the ability to understand art images develops in five stages beginning with an  
25 accountive stage where novices make concrete observations gained from the senses (See Table ).  
26 As skills develop, viewers move through constructive, classifying, and interpretive stages until  
27 finally reaching a re-creative stage where they are able to fuse personal with universal  
28 knowledge.

29           Under the guidance of a trained facilitator, VTS integrates fact-finding, questioning,  
30 speculating, and personal association to help individuals move to deeper levels of understanding  
31 (Yenawine, 1997). Using Housen's (2001) method, the facilitator typically selects three works of  
32 art mindful that more abstract pieces inspire a richer diversity of interpretation. Sessions  
33 traditionally have been held in an art museum but can also be successfully modified for use in  
34 the classroom using projected images (Moorman, Hensel, Decker, & Busby, 2016). Three  
35 standard open-ended questions are used to guide discussions: *What is going on in this picture?*  
36 *What are you seeing that makes you say that?* and *What more can you find?* According to the  
37 educational philosophies of Lev Vygotsky (1993), students are more likely to synthesize learning  
38 when engaging and socializing together, and Housen suggests that repeated practice with these

39 three questions in VTS sessions help learners gain a new approach for discovering deeper  
40 meanings. The discussions that ensue provide a multitude of opportunities to work in groups and  
41 develop communication and observational skills. Maximum student participation and expansion  
42 of thought are enhanced through the use of techniques such as modeling mutual respect, listening  
43 intently, and paraphrasing (Moorman, 2013).

44 Originally created as an educational strategy for children, educators are beginning to  
45 recognize that VTS holds value in higher education including the health sciences (Hailey, Miller,  
46 & Yenawine, 2015; Ludwig 2006; Moorman & Hensel, 2016). VTS has been used to improve  
47 attention to detail during physical assessment, improve sensitivity and communication, and  
48 increase collaboration (Jasani, & Saks, 2013; Klugman, Peel, & Beckmann-Mendez, 2011;  
49 Miller, Grohe, Khoshbin, & Katz, 2013; Naghshineh et al., 2008; Reilly, Ring, & Duke, 2005).  
50 In the field of nursing, undergraduate students have reported that the techniques used in a VTS  
51 session created a safe learning environment and helped them see things differently (Moorman,  
52 2015). Another study found that undergraduate nursing students perceived gaining  
53 observational, cognitive, interpersonal, and intrapersonal skills after participating in a single VTS  
54 session (Moorman et al., 2016). However, very little is known about how VTS might be used  
55 among experienced nurses in leadership positions. The purpose of this project was to explore  
56 perceptions of how nurses enrolled in a Doctorate of Nursing Practice (DNP) program perceived  
57 that they might use VTS in their practice.

## 58 **Method**

59 Fourteen DNP students, enrolled in a leadership-based program, participated in a  
60 classroom VTS session led by a trained facilitator. The group viewed three works of art and then  
61 were asked the three standard VTS session questions. Following the session the participants

62 voluntarily provided written feedback to two open- ended questions: 1. *What was your*  
63 *impression of Visual Thinking Strategies?* and 2. *How might you use Visual Thinking Strategies*  
64 *in your nursing or leadership?* All participants gave written consent to study their de-identified  
65 responses and the university's institutional review board deemed the project as non-human  
66 subject's research. Data were analyzed using the qualitative descriptive approach described by  
67 Sandelowski (2000) with Dedoose Version 7.5 software.

## 68 **Results**

69 The VTS session was generally well received as being enjoyable and having applications  
70 for practice. Three themes emerged for how participants might use VTS: as a teaching tool  
71 (N=13 excerpts), changing thinking in practice (N=7 excerpts), and facilitating interpersonal  
72 relations (N=14 excerpts).

### 73 *Facilitating Interpersonal Relations*

74 Review of the responses revealed 14 excerpts that reflected using VTS to address some  
75 aspect of interpersonal relations including using it as a way to improve communication. One  
76 participant wrote, "We would use these techniques to interview patients, to talk with students, or  
77 meet with other professional." Another wrote, "It (VTS) helps to engage others. From a  
78 leadership perspective, it is important to listen." Another participant felt that VTS could "tear  
79 down barriers to communication thus improve quality and safety." Using VTS as a method for  
80 socialization was mentioned twice. One participant described its use to begin an interdisciplinary  
81 activity, "I could see this as being a great ice breaker at the start of our simulation for the NICU  
82 team, MDs NNPs, RTs, RNs, etc."

### 83 *Changing Thinking in Practice*

84 Describing how VTS might be used in practice as tool to for problem solving or decision  
85 making was found in 7 excerpts exemplified in the statement, “It was an amazing way of  
86 thinking that I will try in my daily work.” Another participant wrote that VTS could be, “Useful  
87 in being proactive and help leaders making right decisions. Useful for physicians and nurses to  
88 use visual cues and use clinical judgement better.” Two excerpts reflected on how VTS might  
89 specifically be used for quality improvement. Specifically, one participant shared, “I believe this  
90 would be a great way to start a RCA (root cause analysis) initiative. If we could use this it might  
91 open up people to see things differently in the environment or process.”

### 92 *Teaching Tool*

93 The use of VTS as a teaching tool was described 13 times exemplified in the comments  
94 “It was an interesting approach to learning. I can see VTS being useful in multiple learning  
95 environments” and included “Impactful teaching strategy especially undergraduate nursing  
96 students who have no clinical experience.” Comment addressed the context of the VTS learning  
97 environment as well as the perceived outcomes. Much as Moorman (2015) found VTS created a  
98 safe learning environment on participant believed VTS could, “...be used for creating a shame  
99 free learning environment.” Two participants specifically commented on how VTS could be  
100 used to generate out of the box thinking, “...helpful for clinical faculty to push students to think  
101 outside the box.” One participant suggested, “I would like to use this in a classroom setting to  
102 help students develop their nursing sixth sense and clinical reasoning.”

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## **Discussion**

104 The DNP students in this study perceived that skills learned in VTS had many practice  
105 implications including teaching and changing thinking. Other studies have found that pre-

106 licensure students perceived that VTS helped them learn to see patterns and develop their  
107 thinking skills in a nonthreatening way (Moorman, 2015; Moorman et al., 2016). There are  
108 striking parallels between how individuals learn to understand art and how Benner (1982)  
109 believed nurses gain clinical reasoning skills. Housen (2001) felt discussing art was an ideal way  
110 to facilitate the acquisition of critical thinking skills precisely because there are no one right or  
111 wrong answer to art interpretation. VTS works on the assumption that viewers are at different  
112 stages, and that they must move beyond being passive receivers of information to construct new  
113 meanings. Learning to be more open and attentive to others' opinions can help inform student's  
114 thinking, which can enhance learning. VTS teaches students to expand other's ideas supporting a  
115 group thinking mentality (Moorman et al., 2016). The findings of this study suggest that VTS  
116 techniques may be used with nurses of all competency levels to help them gain new perspectives.

117 Another application these DNP students saw for VTS was facilitating communication  
118 with patients, students, and colleagues. Pre-licensure students have also reported that they could  
119 apply the communication techniques modeled by the facilitator to help them better communicate  
120 with their patients and other team members (Moorman et al., 2016). Housen (2001) believed  
121 that the techniques used in VTS invited communication and generated motivational listening  
122 where participants genuinely wanted to hear other's ideas and incorporate them into their  
123 personal interpretations. As a VTS facilitator demonstrates an understanding of each student's  
124 response, they model mutual respect which in turn facilitates further communication (Moorman,  
125 2013).

126 The term *facilitate* has been defined as "to make easier" or "help bring about"  
127 (<http://www.merriam-webster.com/dictionary/facilitate>). Core competencies for nurse educators

128 include facilitating learning and facilitating learner development and socialization (Halstead,  
129 2007). As facilitators, nurse educators are expected to create a safe environment for students that  
130 promotes reflection and the achievement of learning outcomes while also coaching students  
131 solve problems and acquire professional values and behaviors (Benner, Sutphen, Leonard, &  
132 Day, 2009; Billings & Halstead, 2013; Halstead, 2007). Yet learning how to facilitate may be  
133 challenging for a novice educator. The key to student engagement with VTS may be successful  
134 facilitation. In depth interviews with undergraduate nursing students who had engaged in VTS  
135 found that the facilitator was key to their participation (Moorman, 2013). Students described  
136 how the facilitator guided the conversation and elicited conversation, never making them feel  
137 criticized or judged. The students reported that this way of interacting made it much more likely  
138 that they would participate and helped them go deeper into their own thinking. The findings of  
139 the current study suggest that one of VTS's greatest potentials may indeed be providing leaders  
140 and educators with an exemplar of how to facilitate. Future research is needed to understand if  
141 training in VTS facilitation techniques can improve general teaching abilities.

142 This study contributes to the growing body of literature which suggests that art and VTS  
143 and can be used in nursing with practitioners of all levels to promote conversations that involve  
144 listening intently and considering others possibilities. This study examined DNP student's  
145 perceptions but stopped short of assessing if the participants actually used any skills learned from  
146 the session in their practice. Future studies are needed to examine how skills learned in VTS translate to  
147 practice.

#### 148 **Web Resources**

149 <http://www.vtshome.org/>

150 [http://www.qsen.org/modules/module11/files/qsen\\_module11\\_part4/](http://www.qsen.org/modules/module11/files/qsen_module11_part4/)

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*Table**Comparison of Benner and Housen Stages.*

Stage	Nursing Skill Development (Benner, 1982)	Aesthetic Stages (Housen, 2001)	Common Themes
I	Novice: Use of context free rules to guide actions	Accountive: Concrete observations gained from senses and personal knowledge	Context free concrete reasoning
II	Advanced beginner: Recognizes recurrent meaningful situational components or aspects	Constructive: Building frameworks for looking at art. Use accessible and logical tools and personal knowledge	Finding frameworks to guide thinking
III	Competent: Creating plans based on analytical and abstract contemplation of the problem	Classifying: Adopting a more analytical perspective placing things within a historical context	Use of an analytical approach
IV	Proficient: Perceiving situations as wholes using maxims to guide actions. Recognizes when picture does not represent the expected	Interpretive: Symbols emerge and works meaning emerge as critical skills enhance the personal encounter	Finding deeper meanings
V	Expert: Intuitive use of vast personal experience	Re-Creative: Merging of personal and universal knowledge	Reasoning that supersedes logic